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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Agricultural Economics

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METHOD OF COMPUTING PARITY PRICES FOR FARM PRODUCTS

Legislation

The parity price for any agricultural commodity is defined in Section 301 of the "Agricultural Adjustment Act of 1938", as "that price for the commodity which will give to the commodity a purchasing power with respect to articles that farmers buy equivalent to the purchasing power of such commodity in the base period; and, in the case of all commodities for which the base period is the period August 1909 to July 1914, which will also reflect current interest payments per acre on farm indebtedness secured by real estate, tax payments per acre of farm real estate, and freight rates, as contrasted with such interest payments, and freight rates during the base period." Freight rates are not accounted for separately in the computation of parity prices inasmuch as prices paid by farmers for commodities include transportation costs from the factory to the store where they were purchased, and freight rates from the local shipping point to terminal markets are reflected in prices received by farmers for farm products.

The Agricultural Adjustment Act of 1938 provides for the use of the pre-war base period August 1909 to July 1914 for determining parity prices of all commodities except tobacco. Public Law No. 876, 76th Congress changed the base period for Burley and flue-cured tobaccos to August 1934 to July 1939. Unamended Section a (1) of the Marketing Agreement Act of 1937 sets up a post-war base for the determination of parity prices of potatoes. Unamended Section 8e of the same Act also permits the use of a post-war base for any other commodity for which the "Secretary finds and proclaims that ... the purchasing power during" the pre-war base period "cannot be satisfactorily determined from available statistics of the Department of Agriculture." For these commodities "the base period ... shall be the post-war period, August 1919 - July 1929, or all that portion thereof for which the Secretary finds and proclaims that the purchasing power of such commodity can be satisfactorily determined from available statistics of the Department of Agriculture."

Formulae

For any of the commodities for which the pre-war base, August 1909 to July 1914, is used, the annual or monthly parity price for any given date is computed by multiplying the average price received by farmers for the commodity in the base period August 1909 to July 1914 by the corresponding annual or monthly index number of prices paid by farmers, including interest and taxes payable per acre as a percentage of the 1910-14 average, and dividing by 100.

The formula for computing currently parity prices for commodities on the August 1909 - July 1914 base is

$$P = \frac{B \times I}{100}$$

P = parity price of commodity.

B = average price of commodity during the base period August 1909 - July 1914.

I = current index number of prices paid by farmers including interest and taxes payable per acre (1910-14 = 100).

A similar procedure is used for computing the parity prices of commodities on post-war bases, except that interest and taxes payable per acre are not included in the computation. For commodities on the August 1919 - July 1929 base, the formula is

$$P = \frac{B \times I'}{100}$$

P = parity price of commodity.

B = average price of commodity during the base period, August 1919 - July 1929.

I' = current index number of prices paid by farmers (August 1919 - July 1929 = 100).

For commodities with other post-war base periods, the average prices during the prescribed base periods and the index numbers of prices paid by farmers with the corresponding period equal to 100 are substituted in the formula.

Base periods

Base period average prices and current monthly parity prices for selected commodities are published in the Midmonth Local Market Price Report of the Agricultural Marketing Service, United States Department of Agriculture. With the exception of potatoes and tobacco, as noted under "legislation", these commodities have the base period, August 1909 - July 1914. However, unamended Section 8e of the Marketing Agreement Act of 1937 permits the use of the base period August 1919 - July 1929 or portion thereof when the pre-war base period for a commodity cannot be satisfactorily determined. In establishing parity prices for commodities under marketing agreements and orders, base prices for several fruits, vegetables and walnuts fall within the August 1919 - July 1929 period or parts thereof. Base prices for fluid milk within this period were also established for markets operating under Federal control. Parity prices for these fruits, vegetables, walnuts and milk in markets operating under Federal control are not computed and published currently.

Index numbers

The current index number of prices paid by farmers including interest and taxes payable per acre (1910-14 = 100) is published monthly in the aforementioned Midmonth Local Market Price Report of the Agricultural Marketing Service. Also published are the current index numbers of prices paid by farmers on August 1919- July 1929 and August 1934 - July 1939 bases.

A comprehensive revision of the index numbers of prices paid by farmers was recently completed. The major revisions included shifting to weights for the index representing farmers' purchases and expenditures in 1935-39 rather than the 1924-29 weights previously used and better and more complete price data for individual commodities purchased by farmers than were previously available. The revised index was presented in July 1941 in the Senate Hearings resulting from Senate Resolution 117 "A resolution relating to a formula for determining parity prices for basic farm commodities."

Adjustment for seasonal variation

Prices of eggs and butterfat have considerable seasonal variation; consequently adjustments are made for normal seasonal variation in prices received by farmers for these items in computing parity prices. The adjustment is made by multiplying the parity price for the current month by the index number of average seasonal variation in the price for that month and dividing by 100.

The monthly index numbers of seasonal variation in prices of eggs and butterfat for 1941 are shown below:

(Monthly average for year = 100)

<u>Month</u>	<u>Eggs</u>	<u>Butterfat</u>
January	96	105.5
February	88	102.1
March	82	103.8
April	82	100.2
May	81	96.1
June	79	93.1
July	90	93.2
August	97	93.1
September	113	96.6
October	127	101.0
November	141	106.1
December	124	109.2

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